END SEMESTER / RETEST EXAMINATION, 2020

Semester : 1st Semester
Subject Code : Me- 101
Subject : ENGINEERING DRAWING

Full Marks : 100 = (part A -25 + part B-75)
Duration : 4 hours

Instructions :
Questions on Part A are compulsory.
Answer any five questions from Part B.

PART- A
MARK- 25

Question 1: Fill in the blanks 1 x 10= 10

a In _____ method, the dimension figures are placed so that they are readable from the bottom and right side of the drawing.
b When a pyramid or cone is cut by a plane parallel to its base, thus removing the top portion, the remaining portion is called its _____.
c The diagonal scales are used when measurements are required in _____ units.
d When the projectors are parallel to each other and also perpendicular to the plane, the projection is called _____.
e In dimensioning, the lines enclosing the dimension line are known as _____.
f The angle between the isometric axes is _____.
g The nut which can be easily operated by the thumb and a finger is called _____ nut.
h The line formed by intersection of principal planes is called _____ line.
i If an isometric drawing is made use of isometric scale then the drawings are called _____.
j _____ is used to draw curves which are not circular.

Question no. 2: State true or false. 1 x 10= 10

a For whit worth thread, the angle between two flanks is 550.
b A rivet is specified by its shank diameter.
c Buttress thread is a combination of the triangular and the square threads.
d The square thread is used for power transmission.
e T-square is used to draw horizontal lines.
f In first angle projection, the left side view will be left side of the front view.

g The lines parallel to isometric axes are called isometric lines.
h Dimension lines should not intersect each other as far as possible.
i Drawing pencils are graded according to increase in relative sharpness.
j Representative factor is defined as the ratio of the length of the drawing to the actual length of the object.

Question no. 3: Choose the correct answer:- 1 x 5= 5

a The part that does not belong to T-square is
a)working edge b)blade
c)stock d)ebony
b What is the inclination of leader line in a drawing?
a)vertical b)horizontal
c)less than 300 d)greater than 300
c In third angle projection, the object is kept in the
a)first quadrant b)second quadrant
c)third quadrant d)fourth quadrant
d The value of the ratio of isometric length to true length is
a)0.141 b)0.372
c)0.815 d)0.642
e The angle of chamfer for hexagonal and square nut as per standards is
a)300 b)450
c)600 d)150

PART- B
MARK- 75

Question no. 4:

a Draw an equilateral triangle of 50mm altitude with the help of compass. 5
b Construct a regular heptagon in a given circle of radius 30 mm. 5
c The distance between the centres of two circles of 65 mm and 90 mm diameter is 120 mm. Draw an internal and an external common tangent to the two circles. 5

Question no. 5:

a What is called R.F? Construct a scale of 1:4 to show centimetres and long enough to measure up to 5 decimetres. 1+5=6
b Construct a diagonal scale of 3:200 showing metres, decimetres and centimetres and to measure up to 6 metres. 9

Question no. 6:

a With the help of appropriate sketches show aligned dimensioning and unidirectional dimensioning 5
b Write in single stroke vertical capital letters the following line giving due importance on their shapes. Height of the letters is 25mm.
" ENGINEERING DRAWING" 10

Question no. 7:

a A line AB, 65 mm long, has its end A 20 mm above the H.P. and 25 mm in front of the V.P. The end B is 40 mm above the H.P. and 65 mm in front of the V.P. Draw the projections of AB and show its inclination with the H.P. and V.P. 9

b Draw the projections of the following points:

i) Q in both HP and VP
ii) R in HP and 35 mm above VP
iii) U in VP and 50 mm behind HP 2x3=6

Question no. 8:

a. Draw neat and dimensional sketches of the following using 25 mm pitch.

i) Whitworth thread
ii) Buttress thread 3x2=6

b. Show by means of neat dimensioned sketches the shapes of the following rivets.

i) Cup head
ii) Pan head
iii) Conical head 3x3=9

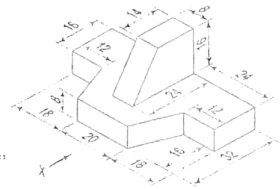
Question no.9:

a. Draw the isometric view of a cone whose base is 40 mm diameter and axis is 55 mm long:
i) When its axis is vertical.
ii) When its axis is horizontal 6

b Draw two views of a single riveted double strap butt joint using snap headed rivets and the thickness of plates to be joined are 12 mm each. 9

Question no. 10

a. Draw the following orthographic views of the object given below which is in 1st quadrant:
i) Front view
ii) Top view
iii) Left hand side view 15



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